



MTBE Contamination, Roselawn, Indiana

Background - On February 14, 2002, the Indiana Department of Environmental Management (IDEM) Leaking Underground Storage Tank (LUST) program received a complaint from the Newton County Health Department that the drinking water smelled like gasoline at the Boezeman Marathon Gas Station in Roselawn. The facility is located at the intersection of State Road 10 and County Road 450 East. On March 18, IDEM and U.S. Environmental Protection Agency (EPA) staff investigated and verified the odor in the drinking water at the gas station. Staff also discovered approximately one hundred public and private drinking water wells. The public water supply wells include the Lincoln Elementary School and Generations Center, located about 1/3 mile north of the gas station. The school has approximately 450 students. The center provides services for infants through senior citizens.

On March 28, school corporation representatives agreed to voluntarily discontinue use of the well at the school for drinking, hand washing and food preparation. Methyl tertiary butyl ether (MTBE) was detected in the school's well at concentrations ranging from 32 parts per billion (ppb) to 350 ppb. Sampling results exceeded the U.S. EPA Drinking Water Advisory of 20-40 ppb for MTBE.

IDEM staff continues to provide oversight of Boezeman representatives conduct soil and ground water sampling to determine the nature and extent of contamination and to conduct a cleanup. Testing results confirmed gasoline contamination extending from the Boezeman property to the school well. IDEM staff also tested over 40 drinking water wells, which identified MTBE in two private wells and confirmed MTBE in the school's well. No other water supplies are impacted by this release.

Current and Future Actions

- **Treatment System for School Well** - A carbon filtration system to treat the drinking water at the Lincoln Elementary school, in Roselawn was installed. Following a testing period during which the system underwent rigorous testing, the system was activated for use. Since the system was activated, no MTBE or other gasoline contaminants have been detected in the treated water. Currently, the system is tested weekly to ensure that it is filtering the MTBE.
- **Drinking Water Well Sampling** – IDEM continues to ensure sampling of public and private wells, as necessary, to test for gasoline contamination, including MTBE.
- **Corrective Action Plan** – IDEM requested Boezeman to submit a Corrective Action Plan (CAP) by March 2003 to cleanup the soil and ground water. Upon approval of a CAP, the CAP implementation will begin immediately.

Gasoline and the Environment

- **Gasoline** - Gasoline is a mixture of thousands of chemicals that are refining from crude oil. When evaluating contamination from a gasoline release, benzene, ethyl benzene, toluene and xylene are contaminants of concern and considered to be the most toxic. These four contaminants have state and federally enforceable primary drinking standards referred to as Maximum Contaminant Levels (MCLs). The MCLs are as follows: benzene – 5 ppb; ethyl benzene – 700 ppb; toluene – 1,000 ppb; and xylene – 10,000 ppb. The four chemicals are commonly referred to as BTEX.
- **MTBE** - MTBE is a common fuel additive in gasoline. MTBE has been used in some gasoline in the United States at low levels since 1979 to replace lead as an octane enhancer. It helps gasoline burn more completely, reducing harmful tailpipe emissions from motor vehicles. For information regarding MTBE, visit the following web site: www.epa.gov/mtbe.

Public Water Supply Well Sampling

- **Lincoln Elementary School** – In April, IDEM sampled the school well and confirmed the MTBE contamination. The result was 200 ppb.
- **Boezeman Marathon** – In April, IDEM sampled the well at the gas station. The results showed 2,300 ppb benzene, 1,400 ppb toluene, and 15 ppb MTBE. Boezeman installed a carbon filtration system on this well to remove the gasoline contamination.
- **Generations Center** – Since the MTBE contamination in the ground water stops several hundred feet short of the Generations Center well, it is not at risk of becoming contaminated. IDEM staff will continue oversight of the sampling and cleanup to ensure that this well is not at risk of becoming contaminated.

Private Water Supply Well Sampling – A total of 41 private wells have been sampled. Some wells were retested later because some contamination was detected. Based on the increase in concentrations of MTBE in two private wells, IDEM requested Boezeman to install carbon filtration systems (filters) at the homes with MTBE. The filters were installed in mid July 2002. IDEM is continuing to monitor wells to ensure that they remain safe for use.

Soil and Ground Water Investigation – The nature and extent of contamination in the soil and ground water has been determined and was approved by IDEM on January 27, 2003. Boezeman's environmental consultants conducted several subsurface investigations on and off-site. The BTEX contamination in the soil and ground water was limited on-site. The MTBE contamination in the ground water extends just north beyond the school well.

Emergency Order of the Commissioner – On July 26, the IDEM issued an Emergency Order of the Commissioner to the North Newton County School Corporation, Lincoln Elementary School. The Order requires the school to immediately install a carbon filtration treatment system on the school's well. It requires the school to test the treatment system. Once sufficient sampling was conducted to demonstrate that the treatment system was functioning properly and based on public input, IDEM made final approval for the filtered water to be used for human consumption at the Lincoln Elementary School. Boezeman is complying with the Order.

For more information –

➤ **Private Water Wells and Boezeman Marathon Investigation**

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➤ **Public Water Supplies**

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317/308-3339 or toll free at 800/451-6027, ext. 308-3339
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➤ **Public Health Issues**

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➤ **Web Sites**

MTBE Contamination in Roselawn, Indiana – Site Summary:
<http://www.IN.gov/idem/>
General MTBE Information: <http://www.epa.gov/mtbe>

➤ **Public Repositories for Complete Site Information**

Lincoln Elementary School
10280 North 450 East
DeMotte, Indiana
219/345-3458

Newton County Public Library
4077 Kellar Street
Roselawn, Indiana
219/345-2010

Newton County Public Library
9458 North 315 West
Lake Village, Indiana
(219) 992-3490

Newton County Public Library
120 East State Street
Morocco, Indiana
219/285-2664

North Newton School Corporation
Central Administrative Office
108 East State Street
Morocco, Indiana
(219) 285 - 2228